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Allocation of decision rights within networks: configuration and definition principles

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Abstract

The aim of the paper is to propose an interpretation of network building and structure in considering the way all types of in-house decisions are organized, i.e. the content of these decisions and their level of application within the network. Indeed, the essence of a network is to be found in the double role of a meta-organization overarching individual actions and, *at the same time*, being able to combine these collective decisions with individual actions.

Firstly, the paper provides a description of the division between individual and collective decisions within networks and of the content of these decisions. We suggest to focussing this description on the concept of intentionality. Intentionality is defined as the power, either directly or indirectly, to decide over a sub class of specific. Secondly, we show that the logic of this allocation of decision rights within the network is an answer to a global principle found in any type of organization situated in a competitive environment, that is to say: how to meet external needs (for instance consumer demand) with the use of as less as possible resources ? The principles of efficiency and effectiveness are proposed to study this question.

INTRODUCTION

POSITIONNING THE PROBLEM

The aim of the paper is to propose an interpretation of network building and structure in considering the way all types of in-house decisions are organized, i.e. the content of these decisions and their level of application within the network. Through a review of supply chain management theory, it is shown that this aspect has been, except in a few examples, underestimated or not explicitly acknowledged. On the contrary, we consider that it is possible to delineate and define a network form of organisation in this perspective. In a sense, the essence of a network is to be found in the double role of a meta-organization overarching individual actions and, *at the same time*, being able to combine these collective decisions with individual actions.

Consequently the role of the analysis is twofold:

(i) to provide a description of the division between individual and collective decisions and of the content of these decisions. We suggest to focussing this description on the concept of intentionality. Intentionality is defined as the power, either directly linked to an individual organization or indirectly linked -through delegation- to another entity, to decide over a sub class of specific actions.

(ii) to show that the logic of this allocation of decision rights within the network is an answer to a global principle found in any type of organization situated in a competitive environment, that is to say: how to meet external needs (for instance consumer demand) with the use of as less as possible resources ?

Relatively simple in a single firm, this question within a network must be reconsidered in a very specific way. Indeed, operational decisions on the one hand, and strategic decisions on the other hand, must be studied simultaneously. To do so we propose the concepts of efficiency and effectiveness, each of these two notions referring to a certain type of logic in the network. Efficiency gives the logic of operational decisions, saving on costs, while effectiveness is concerned with the content of strategic decisions, i.e. alignment of resource profiles *vis-à-vis* external needs. Our objective is to show that the design of network governance must follow a two-track principle of efficiency and effectiveness fulfilment. Grounded in transaction-cost theory and strategic management analysis, our model for organizational choices and design operationalizes and endogenizes simultaneously two types of criteria concerning respectively, transactional alignment and strategic resources. The optimization principle for one particular network is to be found in the fulfilment of an efficiency principle, on the one hand, and an effectiveness principle on the other hand.

To summarize our findings, we propose a matrix that helps to visualize the configuration of decision rights in crossing the two levels of decision making (individual/collective levels) with the content of these decisions (operational/strategic). Such a matrix helps to classify different

categories of networks in relation with the configuration of their decision rights' allocation, and to identify managerial implications for the monitoring of these networks in the real life.

WHAT ARE NETWORKS ? SOME EPISTEMIC CONSIDERATIONS

We would like to define precisely our acceptance of the term of networks. Widely used in supply chain management theory (see for example Cousins, 2002; Hobbs, 1996; Lazzarini *et al*., 2001; Sporleder, 1999; Tan, 2001), the concept is notwithstanding subject to different types of operationalization. We first delineate our conception of networks, based on the concept of governance. Then, stemming from these theoretical backgrounds, we propose a common grid for a comparative study of network governance, seen as an allocation of decision rights.

Many researchers showed the usefulness of the concept of governance for the study of networks (see for example Ghosh and John, 1999; Håkansson and Johanson, 1993; Powell, 1990). The starting point of their research is that networks can be seen as a combination of governance structures, with multilevel relationships between horizontally or vertically-related entities. Basically, the same working hypothesis, previously defined by Williamson (1996), applies: governance structures aim at mitigating all forms of contractual hazards found between the partners in a transaction-cost economizing way. But, at the same time, networks are complex organizational forms not reducible to a simple single transaction unit. For Ghosh and John (1999) the rationale of networks' institutional design is to be found in an "extension to the core model (of transaction-cost economics) by developing the interactions between the creation and claiming of value (...) on the choice of governance forms"(Ghosh and John, 1999:142).

In total, governance in networks is an institutional structure for which the role is simultaneously to define a process of adjusting durably a collective action (or strategy) between autonomous entities through the establishment of a 'private order' (Williamson, 1996) and to design mechanisms (either contractual or non-contractual) enabling the assurance, at the lowest cost, that the individual behavior of partners follows the rules for collective action. We will see that this question of individual and collective actions is the epistemic ground of the definition of network. We thus propose to consider the allocation of decision rights as the conceptual basis of our analysis.

The epistemic nature of network being defined as a specific allocation of decision rights, let us now consider its components. Individual and collective actions, within networks, must be analyzed in relation with the concept of intentionality. In philosophy, this concept is defined as the will to act in a specific manner, or as a project of acting. In the management sciences, intentionality refers to the power, either directly linked to an individual entity or not, to decide over a sub class of specific actions.

Simple when exclusively connected to an individual firm, this concept of intentionality is more complex if applied to network form of organization. Firstly, intentionality must be rely to the way this will of acting is operationalized (i.e. authority), and to the means of this will (content of the decisions). This is the descriptive nature of the notion of intentionality (I) : who takes the decision and how the decisions are taken. But this question of intentionality must also be analyzed through the logic dimension (II) : why some decisions are centralized (at an individual level), while others are decentralized to a collective level. We will consider successively these two questions.

ALLOCATION OF DECISION RIGHTS WITHIN NETWORKS (I)
A DESCRIPTIVE APPROACH

Authority is a specific means to govern specific contractual relationships, distinct from hierarchy as well as market relations. Authority is the institution of a private order between autonomous entities. In networks it can be achieved by other means than hierarchical governance but also by uni- or multilateral contractual provisions Four types of authority modes are identified, from the most informal to the most formal: influence, trust, leadership and *ad hoc* institution (Ménard, 2002).

The allocation of decision rights defines who takes decisions and the nature of these decisions. Such an allocation of decision rights determines the roles and mutual obligations of the parts. As long as the allocation of decision rights coincides with property rights (i.e an independent firm responsible for its decisions) this identification is trivial. But in complex networks, delegation (or even sub-delegation) of decision power will occur. This delegation of power will not systematically coincide with property rights.

As soon as an authority principle and an authority structure have been set up within a network, the question of interorganizational relationships between partners emerges. The objectives of these mechanisms are to promote desirable behavior and prevent undesirable behavior. The means to achieve these objectives are diverse and many scholars have suggested that several types of mechanisms are possible. All of these mechanisms may be seen as decision procedures to fill the gap of contract incompleteness and to enforce the contractual promises. Heide (1994) for example identifies the planning and adjustment processes, the monitoring procedures, the incentive systems, and the means of enforcement. For Stinchcombe (1990), these mechanisms can be summarized in: incentive system, dispute resolution, and standard operating procedures. Brousseau and Fares (2000) define an incentive and coercion scheme, a supervision device and an arbitration mechanism. Following these authors, their findings are synthesized and a grid of two generic key mechanisms is suggested for insuring the continuity of network cooperation: incentive and control systems.

All these mechanisms can be found at individual and at collective levels. In networks, the decision procedures have the particularity to be divided in specific manner: let us now consider the logic of this allocation.

ALLOCATION OF DECISION RIGHTS WITHIN NETWORKS (II)
A LOGICAL APPROACH

When it comes to the design of allocation of decision rights within the network, one must consider the principle(s) explaining decision processes. Following Pfeffer and Salancik's (1978) mold-breaking work in organization theory, we suggest considering two principles, efficiency and effectiveness. We will show that it is possible to bring together these two notions in a common approach. Then, it becomes possible to combine these two principles with the level of decision rights (individual or collective) within the network. A grid and a taxonomy of decision rights' allocation are proposed.

Efficiency

In transaction-cost theory, the concept of efficiency gives the rationale for organizational choices. The key notion of remediableness helps to understand this rationale. For Williamson, the choice of a governance form is made and thus is efficient when no "*feasible* superior alternative can be described and *implemented* with expected net gains" (Williamson, 1999:1092). An alignment principle gives the best governance form according to the different types of contractual hazards found between the transacting agents. As long as this alignment principle is applied in a static comparative analysis, i. e. when we consider that all the strategic choices as exogeneous, this efficiency principle is sufficient. But authors such as Ghosh and John (1999) and Nickerson (1997, Nickerson *et al*., 2001) pointed out the necessity of a complementary approach to better understand organizational choices. Their widened perspective suggests that some variables, considered previously as exogeneous, must be endogenized. Indeed, two types of difficulties have been pointed out by these researchers when it comes to assess the content of strategic choices and their implications for the design of network governance.

The first problem is the identification of contractual hazards created by the multilateral dependencies. Contractual hazards are not given in themselves but instead are related to specific coordination objectives. For instance, the traditional alternative between cost-domination and product-differentiation strategies will lead to different contractual hazards and thus to different types of incentive mechanisms.

The second difficulty may be explained by the limitation of a static comparative analysis. Organizational efficiency cannot help to identify the ability of one particular network to maintain

(or even expand) overtime. This ability will depend upon the creation and protection of a quasi rent. Again, organizational choices are not reducible to a static and cost-minimization principle. It allows us to consider a specific category of decisions: the *operational* decisions concerning the minimization of costs, the strategy dimension remaining stable.

Effectiveness

As suggested by Pfeffer and Salancik (1978) "the effectiveness of the organization depends on which group, with which criteria and preferences, is doing the assessment" (Pfeffer and Salancik, 1978:33). In a sense the concept of effectiveness shows that what is being produced is as important as the way (i. e. the ratio of input to output) it is produced. This concept is "applied by all individuals, groups or organizations that are affected by, or come in contact with the focal organization. Effectiveness as assessed by each organizational evaluator involves how well the organization is meeting the needs or satisfying the criteria of the evaluator" (Pfeffer and Salancik, 1978:34).

Considering exemples of business networks oriented towards satisfaction of their clients, these external evaluators are mainly retailers and final consumers. The criteria show at the same time the ability to satisfy consumers (or clients in a broad sense), but also the ability to choose, at a given time and space, the right utility. This is why effectiveness, as a global standard, is much more difficult to assess than efficiency. As Nickerson *et al*. (2001) pointed out, "consumers are heterogeneous and no one strategy optimally serves all consumers" (Nickerson *et al*., 2001). But this concept of effectiveness will be a way to endogenize strategic choices and their interdependence with resources and governance forms. These decisions are *strategic*: their role is to define key resource and competence, thanks to external needs.

Effectiveness, efficiency and the logic of the allocation of decisions rights within networks.

Operationalization of effectiveness and efficiency concepts must be considered jointly. Our framework brings together the transaction-cost alignment of governance forms with contractual hazards on the one hand, and the matching of resource/governance form pairing with different kind of strategies on the other hand. Following Ghosh and John (1999), this is probably Nickerson (Nickerson *et al*., 2001, Nickerson, 1997) who offers a more complete view of transaction-cost economics in this strategy perspective. For him, individual transactions and strategy can be linked together. To do so he considers that the firm (or the network) is an "expanded institutional set-up", and offers a way for identifying feasible strategies. He shows that the ambivalence of networks is to be found in the design of decision rights' allocation. The network owes its existence, in the long term, to its capacity to unify its strategy in coherence with independent entities. Unlike fully integrated firms, networks, through cooperation, allow simultaneously joint actions and freedom.

Our grid for the allocation of decision rights actually applies this "positioning-economizing" perspective to the categories defined previously, i. e. authority structure and incentive/control mechanisms. For Nickerson *et al.* (2001) "each target position and corresponding resource profile/organization pairing represents a strategy. Consumers respond to the choice of strategy by purchasing products based on the match between their preference and utility and the costs and benefits of products attributes offered by alternatives strategies (...). Heterogeneity in firm strategy reflects that firms occupy different feasible resource profile/organization pairing" (Nickerson *et al*., 2001:254). Then "a target market position is supported by an underlying resource profile, which is paired with an organizational structure to generate product attributes consistent with the target position" (Nickerson *et al.*, 2001:254). There is an underlying idea of a codetermination (or alignment) between two set of key variables: governance form with resource profile (vertical alignment on the left), governance form/ resource profile with strategic orientations (horizontal alignment on the right). These alignments are explained by the fact that "market position, resources, and governance are interdependent, which means each must be chosen with respect to others." (Nickerson *et al*, 2001:252).

A matrix for the analysis of configuration of decision rights within networks

We will consider now the two dimensions of effectiveness and efficiency as a grid to propose a taxonomy of management and control procedures within networks (for a similar approach on taxonomy of networks' institutional structure, see Speklé, 2001; Rice and Ronchi, 2002). In crossing individual/collective level on the one hand and the two principles for allocation of decision rights on the other hand, it is possible, as showed in the matrix (see table 1), to identify the whole range of decisions taken within the networks. Empirical testing of such a matrix is needed. It could help to identify several types of networks and build a taxonomy based upon the way decisions are allocated. In a first attempt, we suggest here a few ideas and delineate some key questions to be explored.

Firstly, the degree of centralization of decision rights must be acknowledged. In absolute terms, some networks may be highly centralized, while others are mainly based on independent firms which delegate very few decisions. Secondly, this degree of centralization must also be tested in relation with the nature of the decisions. Operational decisions could be decentralized, while strategic decisions are centralized On the contrary, operational decision could be centralized, while strategic decisions are decentralized. Another possibility for a network is to centralize, or to decentralize, both decisions. Such a grid gives a wide range of categories, but in real life situations this taxonomy of networks is probably simpler. Indeed, some possibilities will not occur. As a tentative proposition we suggest three types of decision rights' allocation, defining three types of networks:

(i) the *club* network. In this type of network, individual firms work together *a minima*. A very limited amount of decisions are delegated to a central entity. In extreme cases, the delegation of rights can also take the form of an ex ante coordination, without any formal central entity.

(ii) the *quasifirm* network. Networks belonging to this category have a very strong central power where all the main decisions are taken. Individual firms are almost like workers in a firm, but remain residual claimants of their actions. Different forms of quasi-integration fall into this category.

(iii) the *strategic* networks. This is the more complex form of network, which should probably be divided in subcategories. Its main characteristic is to be found in the intertwined nature of the decision rights' allocation. Generally, in this category, the central entity is an emanation of the individual level.

Table 1

A grid for the analysis of decision rights' allocation within networks

	Firm level	Network level
Efficiency	*Decision related to the minimization of costs*	*Delegation of decision related to the minimization of costs*
Effectiveness	*Decision related to the maximization of value*	*Delegation of decision related to the maximization of value*

CONCLUSION

The starting point of this paper is the epistemic nature of networks, that is to say of a meta-organization which role is to combine individual and collective actions in a specific manner. Consequently, the allocation of decision rights within a network is a pertinent perspective to explore the diversity of network forms and to identify managerial questions.

In describing and questioning the logic of this allocation of decision rights, we propose a grid which combines the nature and the content of the decisions with their level of intentionality. This allows us to build a tentative taxonomy of network forms, and to identify relevant issues for managers. One of the outputs of such a research could be to address more clearly the question of how and why strategic and operational decisions are allocated within networks, and to improve the alignment between the decision procedures and the strategic positioning of networks. Empirical tests are needed to corroborate these previous insights.

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